

## The Kozijavkin method

Tucked away in a sleepy Ukrainian town, Vladimir Kozijavkin's clinic has won international acclaim for its treatment of children with cerebral palsy. At a time when Ukraine's health system was crumbling, the clinic stayed open and now treats at least 1000 children a year. Ben Aris reports.

After an hour of driving through the slightly shabby, but clearly fertile, countryside from Lvov in western Ukraine, the road begins to rise as we enter the foothills of the Carpathian mountains. The fields give way to the run down "khrushchyovki"—the five-storey concrete apartments thrown up by the eponymous Soviet leader in the 1950s and 60s to meet the burgeoning demand for housing—that mark the start of the resort town of Truskavets.

A satellite of Lvov, Ukraine's beautiful ancient western capital, Truskavets doesn't compare to the Alps or even to the Tien Shan mountains in central Asia, the Soviet Union's pristine health resort, but Truskavets has long been a location of sanatoria for the Ukrainian population. The town is also home to Vladimir Kozijavkin, a professor who has built up an international reputation as a world leader in the care and treatment of children with cerebral palsy.

To the western eye, the town looks ugly and run down. But the pastel-yellow walls of the brand new clinic strike a dramatic contrast with the rest of Truskavets. The 14 000 m<sup>2</sup> building looks as if it has been transported from a Swiss ski resort and has all the mod-

cons of a modern hotel necessary to cater for the thousands of families making the trek to the clinic from across Europe. Germans, Austrians, Italians, and even the Swiss have been coming to Kozijavkin for treatment ever since the Iron Curtain fell in 1991.

Kozijavkin developed the treatment method which bears his name in the 1980s. His first results were publicised at the All-Union research conference on child neurology in Vilnius in 1989, and he now attends conferences all over the world to talk about his work.

News of his clinic has spread around the world largely through word of mouth. And his reputation is beginning to gather momentum. "We get at least 1000 kids from abroad each year", he says.

Small numbers of patients are now arriving from Britain and America while those from the continent swelled after the German professor Fritz Niethard included the Kozijavkin method in the 1998 edition of his encyclopedia of child orthopaedics as one of the four most effective approaches to rehabilitation in cerebral palsy. More than 15 000 children have been treated here since the clinic opened its doors; 7000 of these come from western Europe.

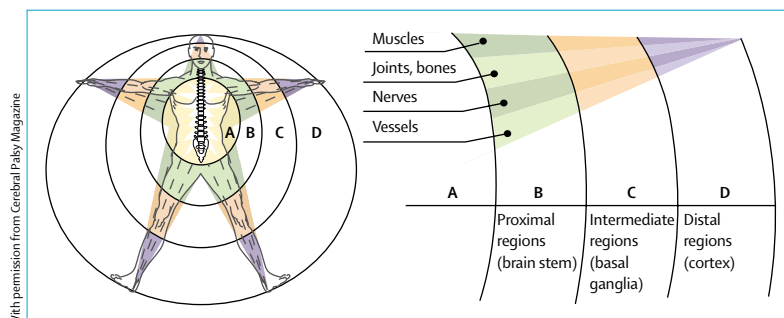
The clinic works on a fortnightly cycle. In the early days, Kozijavkin had to organise charter planes from Germany to get his foreign patients to the clinic. These days, scheduled flights arrive regularly from Frankfurt and pass through the dingy VIP hall at the small airport.

The clinic can cater for 150 families at a time, the bulk of whom still come from Ukraine and Russia. Taking into account the disparity in his patients' incomes, Kozijavkin charges them a tenth of the foreign national fee, if they pay at all. At the end of the 2 weeks, the families go home and continue a course of exercises before returning after 6 months for the next round of treatment.

On the ground floor, 8-year-old Misha Fonomarenko is being put through his paces by a nurse. A chubby and jolly boy, he has little trouble keeping up with the treadmill as Lila, his mother, encourages him.

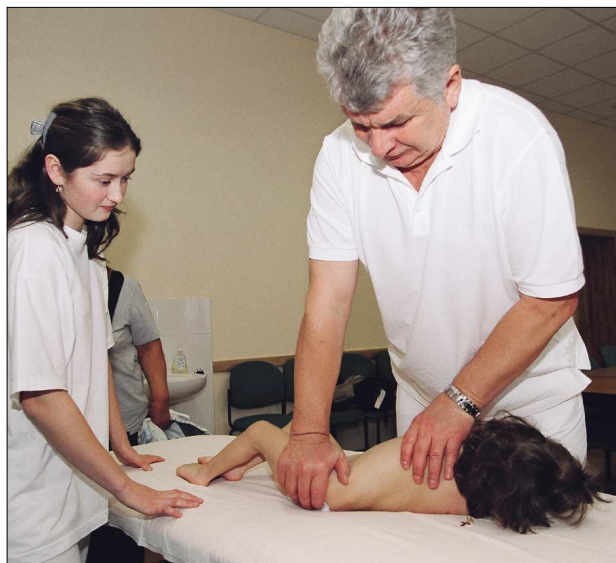
"This is our 13th trip to the clinic", says Lila, who heard about Kozijavkin from another mother whose child has cerebral palsy. "When we first came, [Misha] couldn't even hold his head up and now he is walking and talking. Every time we come he learns something else."

Even a critical foreign visitor would struggle to fault the clinic's facilities, which far exceed those available in Ukraine's state-run health centres. In downtown Kiev, the international radiology centre in Shovkovichnabyun hospital has barely changed since Soviet times. The browning corridors are dimly lit as only every fifth light is on. The tiles on the walls are cracked and ashtrays overflow at the ill-fitting aluminium doors. Although the government's finances have never been healthier, coping with the



### Principle of the star in rehabilitation

Treatment starts on the central structures of the body, then gradually moves towards the proximal (B), middle (C), and distal (D) structures.



Professor Kozijavkin treating 3-year-old Alona

massive investment needed by Ukraine's health-care system is still a struggle.

Despite recent progress—Ukraine's economy has been growing at double-digit rates for several years now—the country still suffers from the most basic public-health problems. Alcohol abuse, poor diet, heavy smoking, and traffic accidents are all disproportionately big killers. And the rise of new afflictions are threatening to decimate the population: drug addiction is rife, and Ukraine, along with Russia, now has the highest rate of HIV infection in the world.

Kozijavkin left his small state-owned clinic in Lvov for the new building about 10 years ago. Amazingly, the unit was both operational and commercially viable at the start of the 1990s—a time when the rest of the country was still reeling from the economic chaos caused by the collapse of central planning.

"The early 90s was a very difficult time, but if you had the know-how, and were producing results, then your reputation grew, making it possible to build up the clinic to international standards", explains Kozijavkin. "There is no comparable clinic in western Europe", he adds.

Ukraine has still not shaken off the aftershocks of the fall of the Iron

Curtain. I left Kiev full of riot police who were expecting trouble in the wake of the hotly contested presidential elections between the old-guard candidate, Prime Minister Viktor Yanukovich, and liberal opposition leader Viktor Yushchenko.

Kozijavkin won't be drawn on politics and, in sleepy Lvov, he is free to concentrate on his work. "The kids come to us spastic, with clawed hands and feet. We find the key to undo this tension and normalise their functions", he says, bending over a table and massaging 3-year-old Yulia's limbs. "This is the core of our intensive neurophysiological method."

He stands Yulia up, who balances on the tips of her toes unable to flatten her feet, "like a ballerina", Kozijavkin coos at the little girl. Then he lays her down again and puts his weight on her hips until the bones crack. Standing her up again, Yulia's feet are nearly flat on the table.

"It is not just massage. The joints have become locked and this blocks the flow of information from the extremities, the limbs, through the spine to the brain. Without this flow of information the brain doesn't develop properly and the kids fail to develop the associated motor skills. What we do is unlock the limbs and open these channels of communication then take advantage of the plasticity of the brain. The physical therapy leads naturally to improved mental skills", says Kozijavkin.

The mothers (it seems only mothers come to the clinic) are all very happy and stand slightly in awe of Kozijavkin. Svetlana Bolkova has made the 2-day train journey to the clinic from Moscow after hearing about it from a friend.

"I knew another mum and she told me the clinic produces amazing results so we came. I have been to other clinics. Yulia has been through three other courses of treatment, but we saw no change until we came here", Bolkova says.

Kozijavkin explains the stages of the treatment by drawing a pentagon and five concentric circles around a body

spread-eagled in the form of Leonardo da Vinci's Vitruvian Man.

The treatment starts with the innermost circle, which encompasses the trunk of the body. Starting with the spine, Kozijavkin attempts to stimulate the joints, nerves, and large muscle groups, which are connected to the phylogenically oldest structures in the brain.

As the patient returns each 6 months, the treatment moves progressively towards the points of the pentagon, marked by the four limbs and the head, stimulating ever smaller joints, nerves, muscles, and vessels, which in turn exercise ever finer motor skills and higher brain functions. The mothers at the clinic were all extremely impressed with the results.

Kozijavkin says that studying the histories of 12 250 patients the method led to: "muscle tone normalisation in 94% of patients; improvement of the head control in supine position in 75% of patients; 62% of patients who were unable to sit before the treatment have learned to sit; 19% of patients began to walk without assistance; and 87% of patients, after the treatment, were able to open their spastically fistled hand".

Irina Chagayeva, mother of 3-year-old Alona and a doctor from Rostov-on-Don, close to Russia's Black Sea coast, says that Alona's hips were locked solid "as if they had been set in plaster", before visiting the clinic, but now they are loose and she has learned to sit up and can walk with assistance.

The state officially recognised Kozijavkin's work in 1993 and President Kuchma personally decorated him at this year's Independence Day celebrations. The clinic is also now in talks with the World Bank, which is thinking about lending money to expand its facilities. Kozijavkin has already ordered the construction of a new swimming pool complex on the clinic's grounds—the back of the clinic is a sea of mud as construction begins—to add a new dimension to the treatment.

Ben Aris